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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/765,146

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Guerino G. Sacripante

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OLIFF & BERRIDGE, PLC.

P.O. BOX 320850

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EXAMINER

SALVITTI, MICHAEL A

ART UNIT

PAPER NUMBER

1767

NOTIFICATION DATE

DELIVERY MODE

01/25/2011

ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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Office Action Summary	Application No. 10/765,146	Applicant(s) SACRIPANTE ET AL.	
	Examiner MICHAEL A. SALVITTI	Art Unit 1767	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 November 2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,3,5-7,10,11,13-21,23-31,34-38 and 41-44 is/are pending in the application.
- 4a) Of the above claim(s) 17-20 and 24-29 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5-7, 10-11, 13-16, 21, 23, 30-38, 41-44 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Continued Examination Under 37 CFR 1.114

A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on November 10th, 2010 has been entered.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1, 3, 5-7, 10, 11, 13-16, 21, 23, 30-31, 34-38 and 41-44 are rejected under 35 U.S.C. 112, first paragraph, because the specification, while being enabling for a single specific type of surfactant (Dowfax 2A1 anionic surfactant), does not reasonably provide enablement for the entire genus of surfactants. The specification does not enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make the invention commensurate in scope with these claims.

Regarding claim 1: Amendment to claim 1 introduces the limitation "the aqueous dispersion comprising a surfactant". The broad disclosure of the instant specification

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discloses neither the use of surfactants, nor the metes and bounds of what surfactants may be utilized. Support for surfactants is seen in the Examples, and only one type of surfactant (an anionic emulsifier, DOWFAX 2A1) is used. The claimed term “surfactant” in line 5 of claim 1 is broader than the claimed invention constructively reduced to practice.

Claim Rejections - 35 USC § 103

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Claims 1, 3, 5-7, 21, 30, 31, 34-38, 41, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Patel et al.* (U.S. Pat. 6,210,853) in view of *Wang et al.* (US 2002/0107306).

Regarding claims 1 and 3: *Patel* teaches an emulsion process (abstract) for forming a curable powder/toner comprising in an aqueous dispersion/latex, mixing resin particles and a coagulant/aggregating agent (abstract), aggregating particles by heating at a temperature below the Tg of the resin (abstract), coalescing by heating at a temperature above the Tg of the resin (abstract), and removing/isolating the particles/toner (abstract). All examples in *Patel* contain surfactant (the cationic coagulant dialkyl benzenealkyl ammonium chloride, which in addition to being a coagulant, has been interpreted to be a surfactant since it contains a charged polar head and nonpolar alkyl tail).

Patel does not teach the resin is epoxy or the curing agent is the elected polyfunctional amine, nor a curing agent is added after coalescing. However, *Wang* teaches making epoxy particles in an aqueous dispersion (abstract) with an amino functional groups on a reactive cross linker (para. 22) added after coalescing (para. 41 and 53). *Patel* and *Wang* are analogous art since they are both concerned with the same field of endeavor, namely making resin particles with aggregation agents in aqueous dispersions. At the time of the invention a person having ordinary skill in the art would have found it obvious to substitute the epoxy-amine latex particles of *Wang* for the latex particles in the process of *Patel* and would have been motivated to do so since epoxy particles make protective powder coatings that resist stains (*Wang* para. 8). At the time of the invention a person having ordinary skill in the art would have found it obvious to add the curing agent as taught by *Wang* and would have been motivated to do so in order to have a curable powder coating.

Regarding claims 5 and 6: *Patel* teaches mixing with a colorant such as a pigment (col. 1 lines 45-49) before the aggregation step (abstract).

Regarding claim 7: The result of isolating the particles/toner of *Patel* is a curable powder.

Regarding claim 21: The combination above lays out motivation for including the epoxy resin, namely to make a protective powder coating that resists stains.

Regarding claim 30: *Patel* teach dry blending with an additive (col. 8 lines 1-5).

Regarding claim 31: *Patel* teach dry blending additives such as charge control additives (col. 9 lines 1-5).

Regarding claim 34: *Patel* teach resin in an amount of 40-90 % (col. 11 lines 15-25).

Regarding claim 35: *Patel* teach the colorant in an amount of 2-12 % (col. 12 lines 20-30).

Regarding claim 36: *Patel* teaches a geometric size distribution, GSD, from 1.15-1.24 (col. 4 line 63), which overlaps the claimed range.

Regarding claim 37: *Patel* teaches a styrene-acrylate resin/poly(styrene-acrylate) (col. 6 line 26).

Regarding claim 38: *Patel* teach cyan, magenta and yellow pigments (col. 11 line 54).

Regarding claims 41 and 43: *Patel* teaches the coagulant/aggregating agent can be polyaluminum chloride (col. 12 lines 50-55).

Claims 10, 11, 13-16, 23, 42, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Patel* (U.S. Pat. 6,210,853) in view of *Wang* (US 2002/0107306)

Regarding claims 10 and 11: *Patel* teaches an emulsion process (abstract) for forming a curable powder/toner comprising in an aqueous dispersion/latex, mixing resin particles and a coagulant/aggregating agent (abstract), aggregating particles by heating at a temperature below the T_g of the resin (abstract), coalescing by heating at a temperature above the T_g of the resin (abstract), and removing/isolating the particles/toner (abstract). All examples in *Patel* contain surfactant (the cationic

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coagulant dialkyl benzenealkyl ammonium chloride, which in addition to being a coagulant, has been interpreted to be a surfactant since it contains a charged polar head and nonpolar alkyl tail).

Patel does not teach the resin is epoxy or the curing agent is the elected polyfunctional amine, nor a curing agent is added to the dispersion. However, *Wang* teaches making epoxy particles in an aqueous dispersion (abstract) with amino functional groups on a reactive cross linker (para. 22) added during the dispersion (para 22). At the time of the invention a person having ordinary skill in the art would have found it obvious to substitute the epoxy-amine latex particles of *Wang* for the latex particles in the process of *Patel* and would have been motivated to do so since epoxy particles make protective powder coatings that resist stains (*Wang* para. 8).

Regarding claims 13 and 14: *Patel* teaches mixing with a colorant such as a pigment (col. 1 lines 45-49) before the aggregation step (abstract).

Regarding claim 15: The result of isolating the particles/toner of *Patel* is a curable powder.

Regarding claim 16: *Patel* teach the particles obtained have a volume average diameter of 3-10 microns (col. 6 lines 65-67).

Regarding claim 23: The combination above lays out motivation for including the epoxy resin, namely to make a protective powder coating that resists stains.

Regarding claims 42 and 44: *Patel* teaches the coagulant/aggregating agent can be polyaluminum chloride (col. 12 lines 50-55).

Claims 1, 3, 5-7, 21, 30, 31, 34-38, 41, and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Veregin et al.* (USPN 5,622,806) in view of *Wang et al.* (US 2002/0107306).

Regarding claims 1, 3, 7 and 21: *Veregin* teaches an emulsion aggregation process (*Veregin* "Summary of the Invention, col. 5) for forming curable powder (toner) compositions, the process comprising:

a) mixing curable resin particles and an aggregating agent (ionic surfactant) in an aqueous dispersion comprising a surfactant (*Veregin* col. 5, processes i-ii);

b and c) heating the dispersion to a temperature at or above the glass transition temperature of the resin (*Veregin* col. 5, step iii); the heating process, in being raised from below T_g to above T_g necessarily requires that the heating occurs below T_g during the transition since temperature is a state function.

e) the coalesced particles are removed from the dispersion (*Veregin* col. 5, step v).

Veregin does not teach the resin is epoxy or the curing agent is the elected polyfunctional amine, nor a curing agent is added to the dispersion. However, *Wang* teaches making epoxy particles in an aqueous dispersion (abstract) with amino functional groups on a reactive cross linker (para. 22) added during the dispersion (para 22). At the time of the invention a person having ordinary skill in the art would have found it obvious to substitute the epoxy-amine latex particles of *Wang* for the latex particles in the process of *Veregin* and would have been motivated to do so since epoxy particles make protective powder coatings that resist stains (*Wang* para. 8). At the time

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of the invention a person having ordinary skill in the art would have found it obvious to add the curing agent as taught by *Wang* and would have been motivated to do so in order to have a curable powder coating.

Regarding claims 5-6: *Veregin* teaches colorants (pigments; col. 5, line 21).

Regarding claims 30-31: *Veregin* teaches dry blending the powder with additives such as fillers (metal oxides; col. 8, lines 1-65).

Regarding claim 34-35: *Veregin* shows an example comprising 95% resin (col. 12, lines 34-40) and the balance colorant 5%.

Regarding claim 36: *Veregin* teaches a geometric size distribution, GSD, from 1.16-1.25 (col. 5 lines 45-50).

Regarding claim 37: *Veregin* teaches a styrene-acrylate resin (col. 12, lines 15-40).

Regarding claim 38: *Veregin* teaches cyan pigments (col. 12, lines 15-40) among others.

Regarding claims 41 and 43: *Veregin* teaches the coagulant/aggregating agent can be benzalkonium chlorides among other recited species (col. 10, lines 55-68).

Claims 10, 11, 13-16, 23, 42, and 44 are rejected under 35 U.S.C. 103(a) as being unpatentable over *Veregin* (USPN 5,622,806) in view of *Wang* (US 2002/0107306).

Regarding claims 10, 11, 15 and 23: *Veregin* teaches an emulsion aggregation process (*Veregin* "Summary of the Invention, col. 5) for forming curable powder (toner) compositions, the process comprising:

a) mixing curable resin particles and an aggregating agent (ionic surfactant) in an aqueous dispersion comprising a surfactant (*Veregin* col. 5, processes i-ii);

b and c) heating the dispersion to a temperature at or above the glass transition temperature of the resin (*Veregin* col. 5, step iii); the heating process, in being raised from below T_g to above T_g necessarily requires that the heating occurs below T_g during the transition since temperature is a state function.

d) the coalesced particles are removed from the dispersion (*Veregin* col. 5, step v).

Veregin does not teach the resin is epoxy. However, *Wang* teaches making epoxy particles in an aqueous dispersion (abstract) with amino functional groups on a reactive cross linker (para. 22) added during the dispersion (para 22). At the time of the invention a person having ordinary skill in the art would have found it obvious to substitute the epoxy-amine latex particles of *Wang* for the latex particles in the process of *Veregin* and would have been motivated to do so since epoxy particles make protective powder coatings that resist stains (*Wang* para. 8).

Regarding claims 13 and 14: *Veregin* teaches colorants (pigments; col. 5, line 21).

Regarding claim 16: *Veregin* teaches the particles obtained have a volume average diameter of 1-7 microns (col. 5 line 45).

Regarding claims 42 and 44: *Veregin* teaches the coagulant/aggregating agent can be benzalkonium chlorides among other recited species (col. 10, lines 55-68).

Response to Arguments

The following responses are directed to the document entitled "Remarks" (pages 8-13) received October 12th, 2010, and to the Applicant's

A) Applicant's arguments concerning the rejection of claims 39 and 40 under 35 U.S.C. § 112, first paragraph (page 9 of Remarks) are moot in view of amendment. Claims 39 and 40 have been cancelled. Therefore the rejection of claims 39-40 under 35 U.S.C. § 112, second paragraph has been withdrawn.

B) Applicant's arguments with respect to the rejection of claims 1,3, 5-7, 10, 11, 13-16, 21, 23, 30, 31, and 34-44 under 35 U.S.C. § 103(a) to *Patel* (USPN 6,210,853) in view of *Wang* (US 2002/0107306) have been fully considered but they are not persuasive.

With respect to applicant's argument (pages 10-13) that modification of *Patel* with *Wang* would render *Patel* unsatisfactory for its intended purpose, due to *Patel* preferring a surfactant-free embodiment, this argument is not persuasive on two grounds:

1) The previously presented claims, received March 12th, 2010, did not require the presence of a surfactant. This limitation appears in the presently amended claims (received October 12th, 2010), and has not been entered since further search and consideration over *Patel* is necessary.

2) With respect to the argument that *Patel* is not combinable with *Wang* on grounds of *Patel* preferring surfactant-free embodiments (see e.g. *Patel* col. 1, lines 30-35 and 15:17-16:47), it is noted that *Patel* appears to prefer surfactant-free dispersions. However *Wang* teaches surfactants as optional components, (*Wang* ¶ [0010]); as optional components, *Wang* effectively allows for a range of 0-20% surfactant (*Wang* ¶ [0019]). *Wang* dissuades from the use of surfactants, since *Wang* recognizes that surfactants have the potential of causing problems in the formation of stable dispersions (¶ [0019]).

The combined teachings of *Patel* and *Wang* suggest the obviousness of foregoing the use of surfactants. Therefore as *Patel* and *Wang* are concerned with the same technical feature regarding absence of surfactant, the position that *Patel* and *Wang* are combinable has been maintained.

C) Applicant's request for rejoinder of claims 17-20 and 24-29 will be given further consideration when all claims directed to the elected invention are in condition for allowance; MPEP § 821.04.

D) With respect to the substance of the telephone interview on November 3, 2010, it was noted by applicants that *Patel* favors processes with little or no surfactant (e.g. *Patel* col. 1, lines 30-35). However, rejection from the Final Action mailed July 12th, 2010 has been maintained for the reason that the compounds used by *Patel* in the Examples, specifically dialkylbenzenealkyl ammonium chloride, are in fact surfactants. This is recognized in the art: see *Veregin* Example 1, col. 11, lines 55-60. Several of

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the aggregating agents in the instant application, specifically the alkyl onium salts are art-recognized to be surfactants.

Prior Art

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. See PTO form 892.

Correspondence

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL A. SALVITTI whose telephone number is (571)270-7341. The examiner can normally be reached on Monday-Thursday 8AM-7PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Mark Eashoo can be reached on (571) 272-1197. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. A. S./
Examiner, Art Unit 1767

/Mark Eashoo/
Supervisory Patent Examiner, Art Unit 1767